

## BAUHAUS, CROWN HALL, FAU: A COMPARATIVE INVESTIGATION OF THE CURRICULUM DESIGN IN SCHOOLS OF ARCHITECTURE

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### Biographical Note

Sarah graduated with a Bachelor of Architecture from University College Dublin. After graduation she spent over five years in professional architectural practice in Cork. She joined Cork Institute of Technology (CIT) in 2006 to teach in the design studio at the Cork Centre for Architectural Education (CCAIE), a joint CIT and University College Cork (UCC) venture. At the CCAIE, she presently co-ordinates the second year design studio and lectures in the History and Theory of Architecture. Sarah is currently researching the area of architectural education as her PhD thesis at UCC. She received a NAIRTL grant in 2008 to undertake comparative case studies on 'Studio Learning'



### KEYWORDS

Architecture; design; education; curriculum; Frank Lloyd Wright; Walter Gropius.

### ABSTRACT

One of the central themes addressed by this paper is the design of the curriculum for architectural education using three schools of architecture: the Bauhaus in Dessau, Crown Hall in Chicago and the Faculty of Architecture and Urbanism (FAU) in São Paulo. It also reflects on the practices in other schools such as Frank Lloyd Wright's Taliesin east and west which are modelled on an apprentice form of training. The Bauhaus introduced a preliminary curriculum - 'The Vorkurs' - which became the model for many foundation year design courses throughout the world. They also employed a system of Workshop Masters and Masters of Form which may have influenced the teaching of design technology in architectural education. Mies van der Rohe, who taught at the Bauhaus, later designed the building and curriculum at Crown Hall. He proposed a curriculum where students learn everything related to a particular building material with the materials getting progressively more complex. Vilanova Artigas had visited Crown Hall during its construction. He proposed a curriculum at FAU where all students in the school work together on different aspects of one large project. In this way students of all stages and ages would learn from each other. Each of the above curriculum designs places an emphasis on a particular ideology held by the architect/teacher. This study is part of a doctoral thesis which also examines the link between the curriculum and the school buildings. The work presented has been supported by NAIRTL funding in 2008-2009 which analysed the design of studio spaces for teaching and learning design based disciplines. Three new schools of architecture have been established in Ireland over the past five years and this research could help inform their curriculum and school design.

### INTRODUCTION

One of the central themes addressed by this paper is the design of the curriculum for architectural education. A number of schools of architecture have been set up in Ireland over the past five years and this research may help inform the choices made in the design of their curricula and associated building design. This paper focuses on of the curricula of three schools of architecture: the Bauhaus in Dessau, Crown Hall in Chicago and FAU in São Paulo. This study is part of a doctoral thesis which also examines the link between these curricula and the buildings in which they are housed. The work presented, which analyses the design of studio spaces for the teaching and learning of design-based disciplines, was supported by NAIRTL funding in 2008-2009.

*"The idea of providing a single large room for the School of Architecture and City Planning's 300 students was in theory the physical expression of the anti-ivory tower aspects of the curriculum; in fact this concept proved to be particularly workable; and because a student is not isolated from others who may be further or less advanced in the course than he, he soon becomes aware of his progress in its carefully planned development" (Carter, 1999, p. 86).*

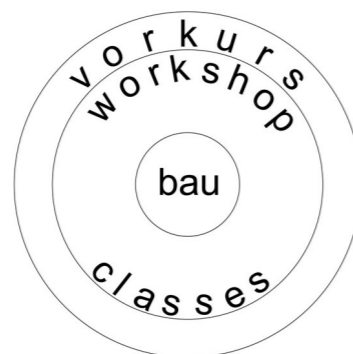
The design of the curriculum for a school of architecture is shaped by many factors, from utopian, social ideas, to pedagogical aspirations, to political or economic forces. This study looks at three schools of design which were led by individuals who not only shaped the overall curriculum but also designed the buildings where they taught. By examining the Bauhaus in Dessau, Crown Hall at the Illinois Institute of Technology (IIT) in Chicago and the Faculty of Architecture and Urbanism in São Paulo (FAU), the structure and ideas behind the curriculum and the manifested spatial strategies of these approaches are compared.

### BAUHAUS

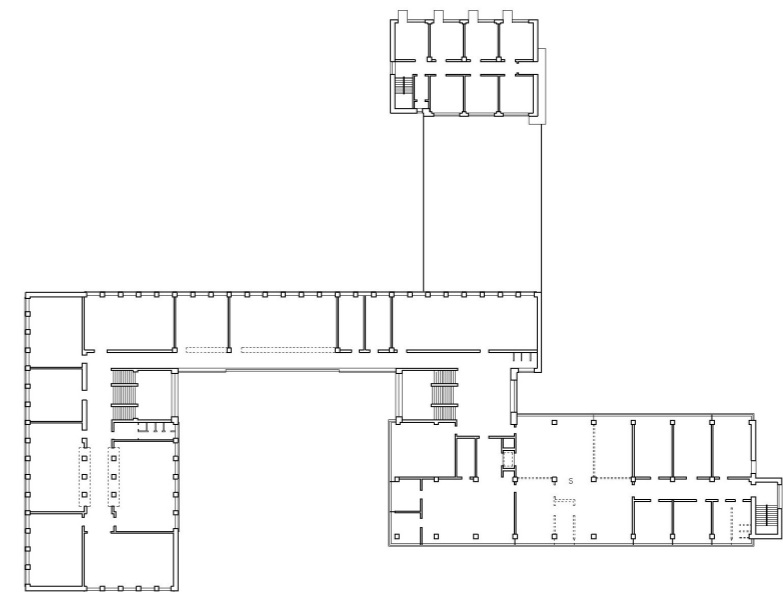
The young German architect Walter Gropius became the director of a new school of design in Germany in 1919. Gropius founded the Bauhaus which was initially located in Weimar and later relocated to Dessau where he had the opportunity to design a purpose-built structure in 1925. Gropius' opening manifesto outlined the aim of the school as uniting the arts through educating people who could design and also fabricate their work.

The plan of the school (Figure 2) shows how each function is given its own wing with workshops in one wing, classrooms in another and a bridge linking to a student accommodation wing.

**Figure 1: Bauhaus curriculum proposed by Walter Gropius (author's own redrawn from Droste, 1998, p. 34).**



**Figure 2: Second floor plan of Bauhaus Dessau (author's own, redrawn from Sharp, 2002).**



Students on the course undertook a preliminary training period of six months called the "Vorkurs" before entering separate studios dedicated to a number of skills including textiles, woodwork and metalwork. The idea of the Vorkurs was to provide students with basic skills so as to cut down on wastage of materials and poor results in the workshops. The Vorkurs was initially taught by Johannes Itten, an artist with previous training as an elementary school teacher. The Vorkurs has influenced the majority of art and design schools throughout the world who now begin instruction with a foundation course. The central goal of the curriculum was to explore "Bau" or building. Gropius exclaimed "the ultimate aim of all creative activity is the building!" (Droste, 1998, p. 22).

Itten's classes influenced student Josef Albers, who went on to teach in the Bauhaus (Horowitz, 2009, p. 17). He proposed that his students focused on working closely with a particular material to fully explore its physical possibilities and structural capabilities. Students focused on materials such as paper, glass and metal. This approach was quite different to the fine art schools that at that time based their lessons on making copies of the works of the old masters. This approach to materiality may have influenced Mies van der Rohe's curriculum at IIT which will be examined later in this paper (Harrington, 1986, p. 44).

**Figure 3: Bauhaus, Dessau; exterior.**

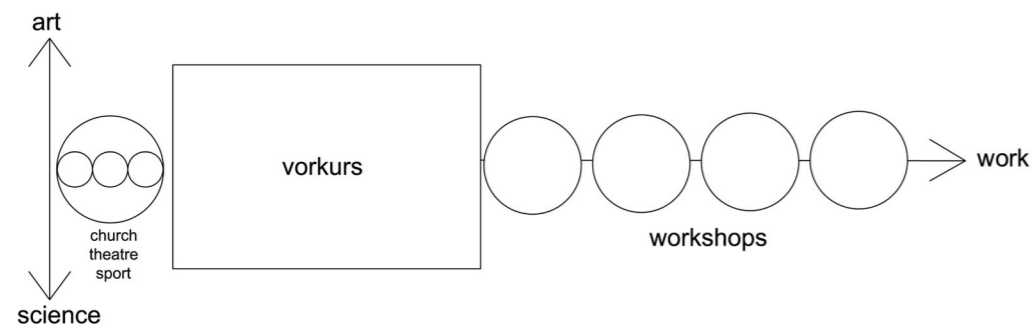


**Figure 4: Bauhaus, Dessau; interior of studio.**



When Gropius decided to end his time at the Bauhaus, he passed his directorship on to the Swiss architect Hannes Meyer. Meyer proposed a restructuring of the course in which students had time within the spheres of church, theatre and sport and then entered an expanded Vorkurs before entering one of four workshops (Droste, 1998, p. 168). The diagram is set on the poles of art and science and shows an output of “Work” (Figure 5). Meyer was soon forced to resign from his position, due to his Communist beliefs (Droste, 1998, p. 200).

**Figure 5: Bauhaus curriculum proposed by Hannes Meyer (Author’s own redrawn from Droste, 1998, pp. 168, 169).**



The final director of the Bauhaus was the German born architect Mies van der Rohe, who later relocated the school to a disused telephone factory in Berlin and proposed a greater level of instruction in architecture. Mies decided to close the school 1933 citing political and economic factors as the reasons. He was offered a post as director of the school of architecture at the Armour Institute in Chicago (which was soon to become IIT) and was also invited to propose the new curriculum. Mies worked on the curriculum proposals with the help of colleagues and former students from the Bauhaus (Blaser, 1981, p. 25).

#### CROWN HALL AT THE ILLINOIS INSTITUTE OF TECHNOLOGY (IIT), CHICAGO

Mies proposed a curriculum with an emphasis on materiality (Figure 6). The students began by looking at projects using brick, stone and timber before studying the complexity of steel or reinforced concrete structures. The material was described as the “Means” while the uses were described as “Purposes” such as houses, schools and offices. Each purpose ascended in complexity throughout the course and ended with a study of “Planning and Creating” of how buildings related to each other in terms of cities, urban design and creative unity (Blaser, 1981, p. 26).

Crown Hall was designed by Mies van der Rohe in 1956 to accommodate this curriculum proposal. The open floor plan allows all students to have studios in a single space with the other functions of the school being located in a semi-basement (Figures 7 and 8).

**Figure 6: IIT curriculum proposed by Mies van der Rohe (author’s own, redrawn from Blaser, 1981, pp. 26, 27).**

theory & training	means
	timber stone brick steel concrete
	purposes
	dwelling commercial buildings industrial buildings public buildings
	planning&creating
	order form structure creativity

**Figure 7: Exterior of Crown Hall, IIT, Campus**



**Figure 8: Interior of Crown Hall, IIT Campus**



**Figure 9: Raised ground floor plan of Crown Hall (author’s own, redrawn from Blaser 2001)**

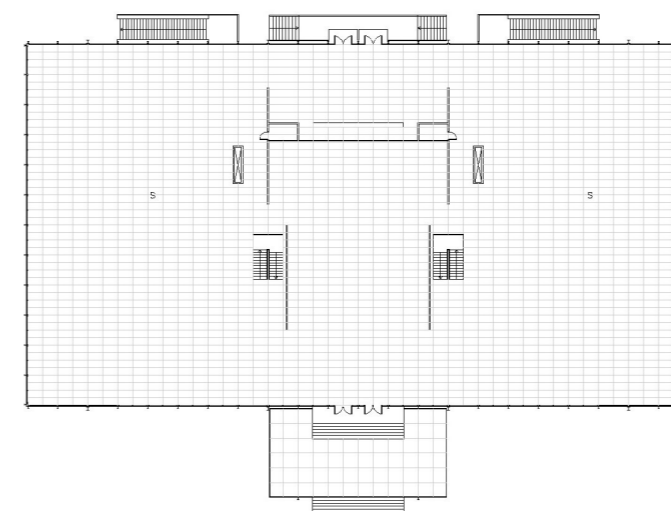


Figure 10: Artigas curriculum for FAU (author’s own, redrawn from Ferraz, 1997, p. 105).

project			
group 1	group 2	group 3	group 4
product design	buildings	the city	graphic design

FACULTY OF ARCHITECTURE AND URBANISM IN SÃO PAULO (FAU)

The Brazilian architect Vilanova Artigas was familiar with the work of Mies, since he had visited IIT campus while Crown Hall was under construction. Artigas was involved with proposing major reforms to the architectural education curriculum in Brazil. In the FAU Reform of 1963, Artigas outlined his curriculum for the school where all students work together on different aspects of the same project. Four major groups would tackle issues from the areas of product design, to buildings, to the city, and graphic design. He proposed a vertical structure where students of all ages and stages work together in teams and inform each others progress. The school designed by Artigas to accommodate this curriculum was built in 1968. The studios are located on the top floor of the building so they are getting the advantage of the natural light through the roof lights. The other functions of the school are located on the lower floors which wrap around a large central space (Figure 12).

Figure 11: Split level second floor plan of FAU, (author’s own, redrawn from Ferraz, 1997, p. 112)

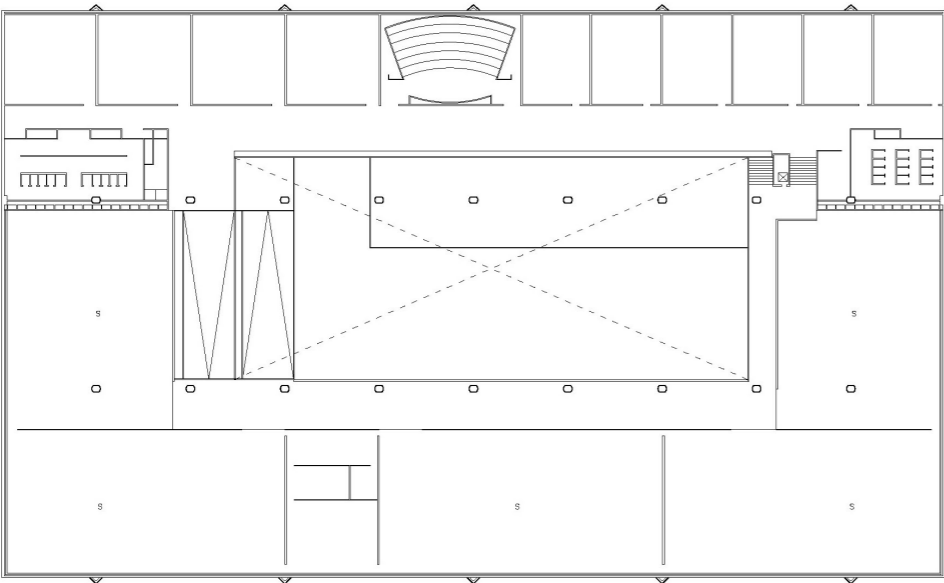
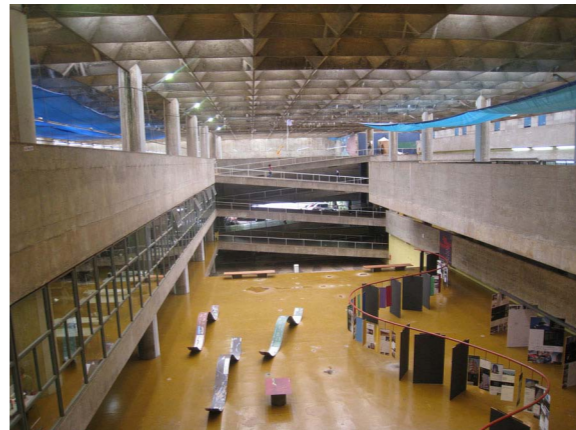


Figure 12: Interior of FAU



CONCLUSION

Each of the three schools proposes a type of educational approach which is shaped in the curriculum diagram (Figures 1, 6, and 10) and embodied within the building spaces. Mies van der Rohe was interested in the idea of a “Universal Space” so that the building could be used for a multitude of functions. Crown Hall is used as a one roomed school house which equally can become a gallery for exhibition of student work or the venue for a party where Mies’ birthday is celebrated every year. Walter Gropius attempted to make a “miniature world” at the Bauhaus, Dessau (Droste, 1998, p. 22). The building includes a wing with studio apartments where students can live, a theatre and canteen as well as the studio and lecture spaces. Gropius wanted to grow the food on campus so that the school would be self sufficient. Artigas emphasised democracy in FAU which is a concrete structure with wide ramps connecting split levels wrapping around a central void. There are physical, visual and acoustic connections between the studios, social spaces and circulation within the school. The building aims to present itself without physical or psychological barriers as Artigas envisaged: “This building depicts the worthy ideals of today: “I saw it as a spatialization of democracy, in dignified spaces, without front doors, as I wanted it as a temple where all activities are valid” (Ferraz, 1997, p. 101). Each curriculum and associated spatial strategy studied in this paper presents certain advantages and challenges. It is hoped that this research will help to inform the choices made by those involved with the design of the curriculum and buildings for schools of architecture.

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**PHOTOGRAPHS**

All photographs were taken by the author.